

Independent Evaluation of the California High School Exit Examination (CAHSEE): Year 5 Evaluation Report

**Lauress L. Wise
D. E. (Sunny) Becker
Carolyn DeMeyer Harris
Shaobang Sun
Xiaolei Wang
Douglas G. Brown**

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EXECUTIVE SUMMARY

The California High School Exit Examination

In 1999, the California legislature passed Senate Bill (SB) 2X establishing the requirement that, beginning with the high school Class of 2004, students must pass a graduation exam in mathematics and English-language arts (ELA) to receive a high school diploma. The legislation resulted in Chapter 8, Sections 60850–60856 of the California Education Code, which lays out requirements for the California High School Exit Examination (CAHSEE). Content for the CAHSEE was recommended by a High School Exit Examination Panel (HSEE), which was established under the legislation, and approved by the State Board of Education (the Board) in fall 2000. The exam was first administered to ninth graders in spring 2001. In 2003, as authorized by Assembly Bill (AB) 1609, the Board voted to defer the CAHSEE requirement to the Class of 2006. A slightly revised CAHSEE was administered to 10th graders in the Class of 2006 during the 2003–04 school year.

Section 60855 of the Education Code requires an independent evaluation of quality and impact of the CAHSEE. The California Department of Education (CDE) awarded a five-year contract for this evaluation to the Human Resources Research Organization (HumRRO) beginning January 2000. HumRRO's efforts have focused on analyses of data from tryouts of test questions and from the annual administrations of the CAHSEE and on activities to determine the impact of the examination. The legislation required an initial evaluation report in June 2000 and biennial reports to the Governor, the Legislature, the Board, and the CDE in February 2002 and February 2004.

In addition to the legislatively mandated evaluation reports, the contract for the evaluation required an annual report of evaluation activities. The present report meets the contract requirement for a report of activities and findings during the fifth year of the evaluation. This report adds to findings and recommendations included in prior evaluation reports (Wise, Hoffman, & Harris, 2000; Wise, Harris, Sipes, Hoffman, & Ford, 2000a; Wise, Sipes, George, Ford, & Harris, 2001; Wise et al., 2002b; Wise et al., 2003; Wise et al., 2004). Findings and recommendations from the prior reports are summarized briefly in Chapter 1 of this report.

Year 5 evaluation activities summarized in the current report include:

Review of Test Developer Plans and Reports. HumRRO continued to monitor test development activities and reports. We reviewed test content changes, test administration procedures, changes to reporting procedures, and the way test forms were equated.

Analysis of Operational CAHSEE Data. HumRRO analyzed results from three operational administrations of CAHSEE in February, March, and May of 2004. These were the first opportunities for students in the Class of 2006, then in the 10th grade, to take the CAHSEE. Results from the analyses of student test results are described in Chapter 2 of this report. Additional analyses of student responses to survey questions administered in conjunction with the test are described in Chapter 3.

Longitudinal Surveys of School Personnel. The annual survey of a representative sample of 24 districts and approximately 90 of their high schools continued for the fifth consecutive year. The surveys, which were administered to principals and English-language arts and mathematics teachers, provided a continuing look at schools' perspectives of the impact of the CAHSEE on their programs. In addition, testing coordinators were surveyed for the third year to identify approaches and problems with the administration of the CAHSEE. Results from these analyses are described in Chapter 4 of this report.

Results from the 2004 CAHSEE Administrations

Results from the three CAHSEE administrations during the 2003–04 school year were analyzed for students in the high school Class of 2006 who took the CAHSEE as 10th graders. Results from the 2002–03 administrations were reanalyzed for 10th grade students in the high school Class of 2005 in a comparable manner so that trends across these two classes could be displayed.¹

Classes of 2005 and 2006

Performance on the CAHSEE mathematics test improved significantly for the Class of 2006 relative to the Class of 2005, even after differences in the score scales were accounted for. Passing rates for the ELA test were largely unchanged. Overall passing rates were above 70 percent on each test individually. Furthermore, 64 percent of the 10th grade students passed both parts, an increase of about 5 percentage points over Class of 2005 sophomores. Performance improved for nearly all demographic groups. The one exception was for students receiving special education services where the combined passing rate remained below 20 percent.

Students Receiving Special Education Services

Results for students receiving special education services were analyzed by type of disability and by ethnic group. The difference in pass rates among race/ethnicity groups of students receiving special education services was pronounced. Only 12 percent of African American and 19 percent of Hispanic students receiving special

¹ Several steps were required to produce comparable results for these two cohorts. First, some students in each cohort participated in more than one test administration, either as a makeup session or to retry a test they had not passed previously. Records were matched as well as possible, even though statewide student identifiers were not yet implemented for use with the CAHSEE. Second, a new score scale was introduced with the 2004 CAHSEE administrations. We estimated scores and changes in passing rates on this new scale for students who participated in the 2003 assessments (see pp. 18–19 for more details). Finally, we examined the accuracy of score equating across administrations and consistency in scoring the student essays and found no problems of note.

education services passed the mathematics test compared to about 45 percent of the Asian and White students receiving special education services. Results for the ELA test were similar.

English Learners

As in earlier administrations, ELA passing rates for English learners who had been redesignated as fluent English proficient were actually higher than for other student groups, suggesting that the lower passing rates for English learners will disappear once they achieve English proficiency. For math, passing levels were once again closely related to level of math coursework completed. We found modest increases in the percentage of students who took advanced mathematics courses and also significant gains in CAHSEE passing rates for each course level. The latter finding suggests that students were better prepared to take these courses based on their earlier coursework.

One final finding in analyzing results from the 2002–03 CAHSEE administrations was that there continue to be some issues with record-keeping and possibly with schools' understanding of CAHSEE regulations and procedures. For instance, some students in the Class of 2006 appear to have taken one or both of the CAHSEE tests more than once, even though that was not intended by the CDE. When the student identification system—California Longitudinal Pupil Achievement Data System (CALPADS)—is in place, analyses should be more straightforward and accurate.

Student Questionnaire Responses

After completing each portion of the CAHSEE, students responded to a series of questions about their reaction to the test and their plans for graduation and beyond. Responses from 10th grade students in the Class of 2006 who participated in the 2004 CAHSEE administrations were compared to responses from 10th grade students in the Class of 2005 who participated in the 2003 CAHSEE administrations. The 2004 questionnaires included four new questions about the students' instruction. Responses to these questions were analyzed for the Class of 2006 only. Chapter 3 includes a detailed analysis of student questionnaire responses.

Student responses to questions about the test and about their plans for graduation and beyond did not change dramatically from 2003 to 2004. Responses to the new questions concerning instruction indicated that most students were receiving instruction in the material covered by the CAHSEE, were familiar with the types of questions asked, and found these questions no more difficult than questions they encountered in their coursework.

Principal, Teacher, and Site Testing Coordinator Reactions

School staff survey responses tell a promising story over the five-year period since the inception of the California High School Exit Examination program. A longitudinal sample of high school personnel was surveyed each spring from 2000

through 2004 to assess awareness, preparation, expectations, and impact of the CAHSEE results. Surveys in the early years relied heavily upon anticipation and expectations, but as schools gained experience with the CAHSEE the focus turned toward actual effects and action.

Detailed analyses of survey responses are presented in Chapter 4. Overall, the five years of the CAHSEE school surveys paint a picture of a maturing program. Awareness regarding the test and supporting materials such as the CDE website, remediation materials, and school coordinator support documentation and training are on the rise. Principals and teachers perceive a variety of benefits of the program, although they remain concerned about potential exacerbating effects on student retention and dropout rates. One might sum up their position as believing that the CAHSEE program is improving education for students who persevere.

Findings and Recommendations

General Findings

The main findings and recommendations stemming from Year 5 evaluation activities are presented in Chapter 5. In brief, the general findings are as follows:

General Finding 1. Student performance on the CAHSEE mathematics test improved significantly for the Class of 2006 in comparison to the Class of 2005. Performance on the ELA improved only slightly, if at all.

Passing rates on the mathematics test, after accounting for changes in the score scale, increased by about five percent in 2004. Mathematics passing rates also increased for every one of the demographic groups that we analyzed. With this increase and the impact of the new score scale, more than 70 percent of the students in the CAHSEE data files passed each part of the CAHSEE. Improvements in mathematics were related to the fact that slightly more students were taking or had taken algebra and higher-level mathematics courses (79.0% compared to 77.8%) and also that passing rates were higher for each level of mathematics courses taken. For example, the CAHSEE mathematics passing rates for students whose highest math course was Algebra I rose from 51 percent to 58 percent. These increases in passing rates indicate that either the effectiveness of the algebra and higher-level courses had improved and/or that students were better prepared by their prior coursework to benefit from high school mathematics courses.

The reason for the lack of a significant increase in performance on the ELA test is unclear. We found modest increases in the percentage of students classified as English learners (16.9% to 18.3%) and students receiving special education services (8.6% to 9.2%). It also appears that a greater proportion of 10th grade students took the CAHSEE, most likely in response to the participation requirements of federal No Child Left Behind legislation. In 2003 the number of 10th grade students taking one or both parts of the CAHSEE was 90 percent of the 2002–2003 fall 10th grade enrollment. In 2004, the corresponding percentage was up, to 94. It is reasonable to

assume that by increasing the participation rate, schools tested more students, including English learners and students receiving special education services, who were not well prepared to pass the CAHSEE.

General Finding 2. The performance of students receiving special education services on the CAHSEE remains low.

Students receiving special education services showed the smallest increase in mathematics passing rates of all demographic groups, improving by only 1 percent, from 27 percent to 28 percent. This group also showed a noticeable drop in ELA passing rates, from 32 percent to 29 percent. There continued to be very significant differences in passing rates for students receiving special education services in different ethnic categories. For ELA, only 17 percent of African American students receiving special education services and 19 percent of Hispanic students receiving special education services passed, compared to 37 percent of Asians and 47 percent of White students. For mathematics, 13 percent of African American students and 19 percent of Hispanic students receiving special education services passed, compared to 46 percent of Asians and 44 percent of White students receiving special education services.

General Finding 3. Despite predictions by principals and teachers, the current CAHSEE requirement has been accompanied by a decrease rather than an increase in dropout and retention rates.

Seventy-three percent of the principals responding to our longitudinal survey and 41 percent of the teachers responding predicted that the CAHSEE would have a negative or strongly negative impact on dropout rates (that is, the dropout rate would increase). Last year, we noted that 10th grade to 11th grade enrollment declines for the Class of 2004, the class initially affected by the CAHSEE, were only 6.8 percent compared to about 7.8 percent for each of the prior five classes. This year, the 10th to 11th grade enrollment decline for the Class of 2005 was even slightly less, 6.6 percent. In addition, 11th to 12th grade enrollment declines were only 7.7 percent for the Class of 2004 this year, compared to 8.4 percent for the Class of 2003 and well over 10 percent for each of the prior four classes. It is possible that increased remediation efforts associated with the CAHSEE requirement have contributed to a decline in dropouts, although we cannot rule out alternative explanations such as reduced employment alternatives. In any event, it is clear that the CAHSEE requirement has not led to any significant increase in dropout rates for the first two classes affected by the CAHSEE.

General Finding 4. Principals reported continued efforts to implement programs and practices to help students who are not prepared to pass the CAHSEE and to promote learning for all students.

Principals were asked about activities to help students who do not pass the CAHSEE or who are not prepared. They reported significant increases from 2002 to 2004 in full implementation of several important efforts including:

- *Work with feeder middle school* increased from 5 to 28 percent.
- *Develop parent support* rose from 0 to 11 percent.
- *Offering demanding courses from the beginning* increased from 25 to 64 percent.
- *Ensure students take demanding courses from the beginning* increased from 20 to 64 percent

Principals were also asked about actions to promote learning for all students. They reported significant increases from 2003 to 2004 in full implementation of the following:

- *Teacher access to in-service training on content standards* increased from 60 to 73 percent.
- *Teacher access to in-service training on instructional techniques* increased from 50 to 64 percent.
- *Student and parent support services* increased from 10 to 27 percent.

In addition to the above four general findings, we note two specific findings based on data from the student, teacher, or principal surveys. Many specific findings from these surveys are discussed in detail in Chapters 3 and 4. We have selected two that appear to be significant both in magnitude and in meaning.

Specific Finding 1. About 90 percent of the students tested reported that most or all of the topics on the test were covered in courses that they had taken.

Several new questions were added to the student questionnaire in 2004. These questions were designed to probe student views about how well their courses prepared them to take the CAHSEE. This information complements information about courses collected from teachers and principals in 2003 in the AB 1609 study. The first question asked whether the topics on the test were covered in courses they had taken. Only 8.5 percent of the students reported that many topics on the ELA test were not covered in courses they had taken. Only 11.4 percent reported that many topics on the mathematics test were not covered in their courses. These responses were closely related to passing rates. Of the students who responded that many topics were not covered in mathematics courses, only 50 percent passed the mathematics test compared to a 69 percent passing rate for students who said most topics were covered and 89 percent for students who said that all topics were covered.

For mathematics, reported coverage of the CAHSEE topics was also related to the level of mathematics courses taken. Of students who had taken only general math, 29.1 percent said that many topics on the CAHSEE mathematics test were not covered in their courses, compared to 16.5 percent of the students who had taken or were taking Algebra I and less than 7 percent of students taking courses beyond Algebra I (or beyond Integrated Math I).

The rate at which students report coverage of tested topics in their classes is important as one indicator of the opportunity to learn material, or the instructional validity of the CAHSEE test. Student self-report of exposure to tested topics is only a rough measure, but the high percentage of students indicating that most topics were covered in their courses is a positive indication that course instruction is aligned with the tested content standards.

Specific Finding 2. Principal estimates of parents' knowledge of the CAHSEE increased significantly in 2004.

Principal estimates of the percentage of parents who know which students had the opportunity to take the CAHSEE increased from 60 percent to 67 percent and estimates of the percentage of parents who knew when the CAHSEE was given rose from 57 percent to 79 percent. Most significantly, estimates of the percentage of parents who know what knowledge and skills are covered by the CAHSEE increased from 26 percent to 44 percent. These increases in parental awareness are important because they could play a significant role in encouraging students to take advantage of available opportunities to prepare for the CAHSEE, such as summer school offerings and remedial courses. In addition, increases in parental knowledge reflect greater general public awareness.

Recommendations

Based on the findings described above and on findings included in prior reports, HumRRO offers four general recommendations and one more specific recommendation.

General Recommendation 1. Keep the CAHSEE requirement in place for the Class of 2006 and beyond.

One of the most positive results of the CAHSEE requirement has been to help schools identify students who need additional help in acquiring essential skills and to implement programs to provide that help. Initial results for the Class of 2006 suggests that it is quite likely that, given some effort on their part, nearly all students will be able to pass the CAHSEE (with the exception of some students receiving special education services, as addressed in a later recommendation). Remediation programs put in place for the Class of 2004 resulted in passing rate increases of about 10 percent a year. Given that nearly two-thirds of the Class of 2006 has completely met the CAHSEE requirement, increases of about 10 percent per year will result in approximately the same percentage of students in the Class of 2006 being able to meet the CAHSEE requirement as currently graduate from high school.

Based on survey responses, principals, teachers, students, and parents now know a lot more about the CAHSEE and appear to believe the requirement must be met. Canceling or further deferring the requirement would likely not only reverse much of the progress that has been made in helping students master required skills,

but also would weaken or destroy the credibility of future efforts to improve instruction and student achievement.

General Recommendation 2. Continue efforts to help students prepare for and take more challenging courses.

In addition to developing new programs, simply encouraging students to take advantage of courses and programs already in place would help enormously. Results have consistently shown that students who are prepared for and take Algebra 1 and subsequent courses are very likely to pass the mathematics portion of the CAHSEE. Preparing students to take higher-level mathematics courses is a particular challenge for students receiving special education services. Many fewer of these students are currently taking Algebra I by the 10th grade.

In prior administrations, passing rates for the mathematics test were considerably lower than passing rates for the ELA test (about 50% compared to 70%). Our previous reports highlighted mathematics performance. Similarly, schools' best efforts were naturally focused on improving performance in mathematics. Now that the passing rates are essentially equal, more attention needs to be given to the effectiveness of ELA coursework and to efforts to prepare students for success in this coursework and to help students who are not initially successful in learning required skills. Note, too, that English learners who reach English proficiency have little difficulty in passing the ELA portion of the CAHSEE. Further efforts to help English learners reach proficiency will further improve ELA passing rates for this group.

General Recommendation 3. Encourage efforts to identify remedial programs that work and disseminate information about these programs to all schools.

The CDE has developed various guides and workshops to facilitate improved remediation efforts across the state. In addition, successful remediation programs developed by schools and districts could be identified (by the CDE or by the districts themselves) and shared with other schools to encourage their broader implementation. "Success" of the programs could be measured by student passing rates on the CAHSEE subsequent to completion of these programs.

General Recommendation 4. Continue to explore options for students receiving special education services.

A High School Exit Examination for Pupils With Disabilities Advisory Panel, formed in response to SB 964, is studying alternatives for helping students receiving special education services address the CAHSEE requirement (<http://www.cde.ca.gov/ta/tg/hs/sb964study.asp>). In past evaluation reports, we also called for consideration of alternatives for students receiving special education services. Given no significant improvement in passing rates for students receiving

special education services in the Class of 2006, our recommendation stands. Here are some examples of the types of ideas that might be considered:

- Set realistic expectations. Work to more clearly differentiate students who can attain the regular curriculum from those who cannot. Set alternate goals with alternate recognition of accomplishments for students who cannot manage the regular curriculum. As noted below, more study is required to identify appropriate expectations and instruction for the very different types of students qualifying for special education services.
- Allow more time. The majority of students receiving special education services may be able to meet the CAHSEE requirement, but it may take many of them longer to reach the required level of achievement. Providing regular alternatives to the usual twelve-year curriculum for these students would support development of required skills. A careful study of ways of spreading out the curriculum at different points would be preferable to simply adding one or more years at the end as makeup time.
- Investigate curricula. Collect information on the curriculum provided to different types of students receiving special education services. Information on the effectiveness of different curricula for students with specific types of disabilities could be used to improve the effectiveness of individualized educational plans (IEPs) for students receiving special education services.
- Collect accommodation information. Information should be collected on relationships of specific accommodations provided for CAHSEE (e.g., small group administration, oral presentation of instructions), accommodations specified in IEPs and provided with instruction, and performance on the CAHSEE. This information would enhance CDE's ability to counter challenges of fairness for students with specific disabilities and would support further research on the appropriateness of these accommodations in measuring the intended constructs.

Specific Recommendation 1. Work to implement a system of student identifiers and student records that provide information, including (a) CAHSEE passing status, (b) students on track to graduate with their class, (c) students who have been retained, and (d) students who have dropped out.

As the Class of 2006 nears graduation, policymakers will want to know how many students have passed the CAHSEE. Up to this point, there has not been a statewide data system that would allow us to accurately determine how many of the students who have passed the CAHSEE earlier are still in school and how many new students have come into the state who have not yet taken the CAHSEE. Comparing the number of students who passed the CAHSEE in prior years to current enrollments would not give an accurate estimate of the number of students who still need to pass the exam. Further, some students transfer from one high school to another within the state and other students do not complete sufficient

credits to advance to the next grade, thus changing the date of their expected graduation. Without statewide identifiers, it is also impossible to count these students appropriately in cumulative estimates of the CAHSEE passing rates.

The California Longitudinal Pupil Achievement Data System (CALPADS) was established in response to SB 1453 (enacted in 2002) to further comply with federal accountability requirements. Student identifiers, required to implement this data system, are being established by the California School Information Services (CSIS). If successful, this effort will enable more complete answers to policymakers' questions about the CAHSEE passing rates.

The CDE may also wish to work with districts to track students beyond high school accountability. As noted under "Questions for Further Inquiry" 2 on the next page, information, even for a modest sample of students, on the relationship of the CAHSEE scores to success in college work and in other endeavors would be very useful in reviewing the rigor of the CAHSEE requirement.

Questions for Further Inquiry

This report brings our five-year effort as the independent evaluator for the CAHSEE to a close. Because students have not yet graduated or failed to do so under the CAHSEE requirement, much remains to be learned about the longer-term effects of this program. The CDE has embedded a number of new ideas for addressing CAHSEE issues in a request for proposals (RFP) for continuing the evaluation. In concluding this report and this evaluation contract, we offer our own perspective on questions for further inquiry.

1. What are effective strategies for ensuring that students have the knowledge and skill to pass the CAHSEE?

The Request for Proposals (RFP) to continue the independent evaluation of the CAHSEE included a specific requirement to identify "effective remediation strategies for students who have difficulty in ELA and math." The 2003 study of instruction conducted in response to the AB 1609 requirement concluded that the CAHSEE requirement had led to many new classes or programs to help students having difficulty with the CAHSEE but that these programs were not yet fully effective. We also noted that the CAHSEE passing rates varied considerably by program and school. The CDE has developed guides for teachers and students to assist in preparation for the CAHSEE. A systematic review of the use and effectiveness of these guides, together with identification of additional remediation strategies that might be included in expanded guides would go a long way toward maximizing opportunities for all students to learn the material covered by the CAHSEE.

2. Is the CAHSEE requirement sufficiently rigorous?

As independent evaluators, we feel that the current CAHSEE requirement reflects a delicate balance between what students need to know and be able to do and what is currently reasonable to expect them to achieve. Other groups have called for significantly more rigorous graduation requirements (e.g., Achieve Inc.

2004). Kirst (2003) has pointed to the high proportion of college enrollees who must take remedial coursework as evidence that many high school graduates do not yet have expected levels of knowledge and skill.

It would be very useful to have data relating the CAHSEE scores to subsequent success in college and in other post-high-school activities, and perhaps to other predictors of college performance, such as SAT scores. Longitudinal data on the CAHSEE examinees would provide empirical information that could be quite useful in deciding how and when/whether to adjust the CAHSEE passing levels.

3. What options might be provided for students receiving special education services?

As noted above, we believe that further consideration of options for students receiving special education services is needed. New research and new syntheses of existing research would support identification and consideration of these options. Most commonly, the population of students receiving special education services is treated as a single group in research studies. In fact, these students are a collection of students with diverse physical and mental challenges that they must overcome. Research identifying appropriate and effective programs and accommodations for students with different types of challenges is essential to the identification of options for helping these students meet the CAHSEE requirement.